

ABSTRACT OF THE DISCLOSURE

In a process for forming on a substrate a transparent conductive film having crystallizability, the process comprises a first step of forming a film at a first film formation rate and a second step of forming a film at a second film formation rate, and the relationship between film formation rates in the respective steps satisfies:

$$2 \leq (\text{second film formation rate})/(\text{first film formation rate}) \leq 100;$$

which provides a process for producing a transparent conductive film by a deposition process advantageous for cost reduction, which can form in a short time a transparent conductive film having an uneven surface profile with a high light-confining effect, and can bring about an improvement in photovoltaic performance and enjoy a high mass productivity when applied to the formation of multi-layer structure of photovoltaic devices.